

## Abstracts

A283

various elective knee surgeries with rFVIIa coverage in hemophiliacs with inhibitors from a US payer perspective. **METHODS:** A literature-based Markov model was used to compare the direct medical costs and quality-adjusted life-years (QALYs) of 2 hypothetical cohorts of hemophiliacs with inhibitors and frequent bleeding episodes: one undergoing elective orthopedic surgery and the other not undergoing surgery. Based on the published literature, surgery was assumed to reduce bleeding frequency by 82%, from 9.13 to 1.64 episodes per year, and improve pain and quality of life. Surgery costs included perioperative rFVIIa costs, inpatient and rehabilitation care, and repeat procedures. **RESULTS:** Estimated knee surgery costs ranged from \$677,000 (in knee arthrodesis [KA]) to \$840,000 (in total knee replacement [TKR]). Surgery reduced the incidence of bleeding episodes and resultant costs. Specifically, the cumulative discounted savings in bleeding-related costs were \$537,000 and \$991,000 at 5 and 10 years, respectively. Overall, the cost of surgery was offset within 7 to 9 years of the index procedure, depending on the surgery. Surgery also resulted in discounted net gains of 1.88 and 3.47 QALYs after 5 and 10 years, respectively. The cost per QALY gained with KA and TKR fell under \$50,000 during the 6th and 7th years, respectively. Changes in assumptions regarding prophylaxis regimen, survival, baseline bleeding frequency, patient weight, and rate of repeat surgery affected the results to various degrees. **CONCLUSION:** Despite high upfront costs, knee surgery with rFVIIa in hemophiliacs with inhibitors leads to cost savings and QALY gains within a few years, primarily due to reductions in bleeding episodes.

PHM12

#### **COST-EFFECTIVENESS OF DASATINIB VS IMATINIB 800 MG/DAY IN PATIENTS WITH IMATINIB-RESISTANT CHRONIC MYELOID LEUKEMIA IN SPAIN**

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**OBJECTIVES:** The cost-effectiveness of dasatinib was evaluated, comparing dasatinib (2 × 70 mg) to 800 mg imatinib per day in imatinib-resistant chronic CML, from the perspective of the Spanish health care system. **METHODS:** A Markov model was developed (cycle length one month) which incorporates clinical, epidemiological and cost data to assess the cost-effectiveness of dasatinib compared to imatinib in imatinib-resistant chronic CML patients (95% of CML patients in Spain). The model allows the simulation of the distribution of patients over the chronic, accelerated and blast phase of CML. At model entry, patients are classified according to initial best response rates, from randomised Phase II clinical trial data comparing dasatinib with imatinib (800 mg) in imatinib resistant patients. Distinction is made between no response, complete hematological response, partial cytogenetic response and complete cytogenetic response. Disease progression depends on initial response to treatment. Treatment costs were obtained from eSalud, a health care cost database in Spain. Health effects and costs were counted until all patients reached the “death” state. Both costs and effects were discounted annually at 3.5%. The robustness of the results was tested in deterministic sensitivity analyses. **RESULTS:** In the base case analysis, treatment with dasatinib is associated with a gain of 0.64 quality adjusted life-years (QALY) and cost savings of €16,600, resulting in an estimate of dominance for dasatinib. Sensitivity analysis of key variables confirmed that results remain located in the south-east quadrant of the CE-plane (i.e. domi-

nance). **CONCLUSION:** Compared to imatinib, dasatinib is associated with increased life expectancy and lower overall costs, indicating that dasatinib is a dominant treatment strategy for the treatment of patients with CML who are resistant to imatinib.

#### **HEMATOLOGICAL DISORDERS—Health Care Use & Policy Studies**

PHM13

#### **THE EFFECT OF RESTRICTING FERTILITY SERVICES IN GERMANY**

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**OBJECTIVES:** In 2004 the German government limited the adoption of assisted reproductive technology (ART) treatment costs by statutory health insurance from 100 to 50 percent. Furthermore age limits were adapted and the number of funded ART cycles was restricted from four to three cycles. The aim of this study was to estimate the effect of restricting fertility services from a health fund's perspective. **METHODS:** Over the period of 2002 to 2005 our study investigated the changes in the number of ART cycles, treatment costs and birth rates after assisted reproduction. The analysis is based on health insurance frequency statistics including fee schedule items reimbursed by health insurance funds. ART cycles included intrauterine insemination (in natural or stimulated cycles), in vitro fertilisation and intracytoplasmic sperm injection. **RESULTS:** The number of funded ART cycles ranged from 73,405 in 2002, 104,542 in 2003, 35,352 in 2004 to 32,099 in 2005. The number of ART cycles increased expectedly between 2002 and 2003. The gain add up to 42%. In 2004 the number of ART cycles decreased by 66%. This downward trend continued in 2005 with a decline by another 9%. In 2004 treatment costs funded by the health insurance decreased by 84% according to the limitation of reimbursement. Corresponding to the falling number of ART cycles the birth rate depending on ART decreased too. However, the decrease had no statistically significant impact on the common birth rate in Germany. **CONCLUSION:** With restricting fertility services the number of ART cycles declined statistically. The absolute number of births decreased too. One of the reasons may be high co-payments which will mean many patients can not longer afford this special kind of medical treatment.

PHM14

#### **PATIENTS WITH MYELODYSPLASTIC SYNDROMES (MDS) CHALLENGE TRANSFUSION RESOURCES NOW AND IN THE FUTURE**

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**OBJECTIVES:** To find evidence on the economic impact of anemia and transfusion in MDS and estimate the prevalence of transfusion-dependent MDS patients in Germany and make a first appraisal of the economic impact of these patients. **METHODS:** Literature search via PUBMED was systematically conducted (covering January 1996 to December 2006) using defined search terms, e.g. Myelodysplastic Syndrome AND Transfusion AND Cost and cost analysis OR cost of illness. From the German transfusion medicine's perspective desk-top researches were conducted to evaluate the economic burden of transfusion-dependency of MDS patients in Germany. **RESULTS:** Three cost-analyses regarding transfusion costs of MDS patients were identified with major distinctions in study design, methods,